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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 20

Application Number: 09/176,374

Filing Date: October 21, 1998

Appellant(s): TAKEUCHI, ESTHER S.

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/1/01.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The brief contains a statement that claims 1-10 may be grouped together and claims 13-19 may be grouped together, but does not include reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

4,709,472	MACHIDA ET AL.	12-1987
5,549,717	TAKEUCHI ET AL.	8-1996

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 10.

Claims 5, 6, 8, 9 and 16-18 are rejected under 35 U.S.C. 112, second paragraph. This rejection is set forth in prior Office Action, Paper No. 12.

(11) Response to Argument

Rejection under 35 U.S.C. 112, second paragraph

Applicant argues that claims 5, 8 and 16 do not contain indefinite language and points to various figures contained in the specification as support. However, as stated in the Advisory Action of 1/8/01 (Paper No. 12) the rejection of claims 5, 6, 8, 9 and 16-18 is maintained because “a curved surface cannot lie within a plane” (see claims 5, 8 and 16). Neither the figures nor the specification provide support for a curved surface that lies within a plane. Specifically, if one takes their hand and creates a curve with their fingers, the fingers cannot lie within a single plane. Thus, it is unclear where “the curved edge surface” of claims 5, 6, 8, 9 and 16-18 is located in relation to the electrode assembly.

Rejection under 35 U.S.C. 103(a)

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues Takeuchi does not teach that either the cathode electrode or the anode electrode (whichever is longer) is folded in on itself to create a pocket for the mandrel. See page 14, lines 10-18 of the Brief. This feature is taught by Machida, the primary reference, in col. 5, lines 61-col. 6, lines 10 and shown in Fig. 6.

Applicant argues Machida does not show or teach a longer electrode folded in upon itself. Applicant asserts that the electrodes of Machida are “substantially the same length”, as seen in Figs. 5 and 6 of Machida. See page 14, lines 23-31 of the Brief. Examiner disagrees with

Applicant's analysis of the Machida reference. Specifically, Machida does teach and suggest a longer electrode folded in upon itself. This feature is taught by Machida in col. 5, lines 60-col. 6, line 10 and shown in Fig. 6. Fig. 6 clearly shows and suggests that the positive electrode is longer than the negative electrode and the positive electrode is folded upon itself.

Applicant argues that Takeuchi does not teach a protective pocket formed from an electrode folded in upon itself. However, this limitation is taught by Machida (primary reference). See Fig. 6.

In response to applicant's argument (paragraph beginning on page 15, line 20) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the specific method for wrapping the separator around the mandrel) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Whether or not the separator material of Machida is pinched between the spool halves of the mandrel is not relevant to the claimed invention.

Furthermore, Takeuchi teaches a rectangular mandrel used to wind a spiral electrode (jelly roll) assembly. Takeuchi teaches that a rectangular mandrel or a circular mandrel may be used to wind the electrode assembly. See col. 6, lines 59-67 and Fig. 13 of Takeuchi. See reason for combining in the Office Action of 10/30/00 (Paper No. 10).

Note that Applicant does not argue the reasons for combining contained in Paper No. 10.

The arguments regarding independent claim 11 are not convincing (page 16 of Brief). In response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues that Takeuchi does not teach or show a rectangular pocket defined by a single electrode (taught by Machida) and Machida does not teach or show an electrode folded upon itself, so as to define a rectangular pocket (taught in Fig. 6 and col. 5, lines 61-col. 6, line 10 of Machida).

The arguments regarding independent claim 12 are not convincing (end of page 16-page 17 of Brief). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues that Takeuchi does not teach or show the longer of the electrodes being folded upon itself at the innermost portion of the assembly to include two substantially flat sections of the longer electrode facing each other with only a substantially flat section of separator therebetween (taught by combination of Machida and Takeuchi). Further argued, Machida does not teach or show two substantially flat sections of the longer electrode facing each other, but rather shows a round spool. However, Machida has been combined with Takeuchi which teaches a mandrel used for winding an electrode assembly may be round or rectangular. Applicant does not argue the combination of Machida and Takeuchi.

The arguments regarding independent claim 13 are not convincing (page 17 of Brief). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

Art Unit: 1745

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues that Takeuchi does not teach or show a configuration wherein at the innermost portion of the assembly one of the electrodes is folded upon itself to define a substantially rectangular-shaped pocket with only separator therein (taught by combination of Machida and Takeuchi) and Machida does not teach or show an electrode folded upon itself, so as to define a rectangular pocket. However, Machida has been combined with Takeuchi which teaches a mandrel used for winding an electrode assembly may be round or rectangular. Applicant does not argue the combination of Machida and Takeuchi.

Starting of page 18 of the Brief, Applicant argues the combination of the Machida and Takeuchi references. Page 18 through the middle of page 20 recite case law only. Starting at the middle of page 20 Applicant argues a person of ordinary skill in the art would not have been motivated to use the Takeuchi reference for several reasons. First, the electrode assembly of Takeuchi is wrapped such that the anode electrode and the cathode electrode of the subassembly are in direct contact with one another after winding by the mandrel. However, Takeuchi is the secondary reference of the combination and is not applied to teach this limitation. Machida teaches all limitations of the claimed invention except for the rectangular mandrel (Machida uses a circular mandrel). Takeuchi is applied to show a teaching in the art that a circular or rectangular mandrel may be used to wrap an electrode assembly. Takeuchi discloses both rectangular and circular mandrels, hence, the prior art combination has a clear suggestion to use the rectangular mandrel of Takeuchi in place of the circular mandrel of Machida.

Applicant concludes that a person of ordinary skill in art would in all probability bypass the Machida disclosure entirely, as there would be no desirability in using it to solve the problem of winding anode-cathode sub-assemblies and removing the mandrel without damaging the electrodes. Examiner disagrees and points out the Machida teaches all aspects of the claimed invention except for the substantially rectangular mandrel. Takeuchi is used in combination with Machida to teach that both circular and rectangular mandrels are known in the art for wrapping electrode assemblies.

Applicant specifically argues the combination in the first paragraph of page 22 only. Applicant asserts that the combination of Machida and Takeuchi teach away from the claimed invention. Applicant argues that if the rectangular mandrel of Takeuchi were used for the circular mandrel of Machida, the rectangular mandrel would have to be sliced in half so that it could pinch separator material therebetween, as taught by Machida. Such a two piece mandrel is undesirable.

Examiner disagrees with Applicant's analysis of the Machida and Takeuchi references. Specifically, if the rectangular mandrel of Takeuchi were used for the circular mandrel of Machida, the rectangular mandrel would not have to be sliced in half so that it could pinch separator material therebetween. It is unclear how Applicant reaches this conclusion. It is the position of the Examiner that one of skill in the art would have found it obvious to use the rectangular mandrel of Takeuchi for the circular mandrel of Machida. Furthermore, even if Applicant's conclusion were correct, the claims do not exclude a two piece rectangular mandrel. The claims require a "mandrel being of substantially rectangular cross-section having a pair of substantially parallel and planar oppositely-facing surfaces".

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Takeuchi contains the motivation for combining because the reference teaches that both rectangular and circular mandrels are known in the art for winding electrode assemblies.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Tracy Dove

Examiner 1745

T. Dove
May 20, 2003

Conferees

Gabrielle Brouillette:

SEE PREVIOUS EXAMINER ANSWER

Paul Thibodeau:

SEE PREVIOUS EXAMINER ANSWER

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Art Unit: 1745

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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Examiner 1745

T. Dove
August 1, 2001


Patrick Ryan
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Conferee Paul Thibodeau:

